

A subcutaneous port catheter system includes a reservoir defining a chamber therein. The catheter system also includes a guide catheter attached to the reservoir. The guide catheter has a guide lumen and a distal guide orifice.

The catheter system further includes an inner catheter attached to the reservoir.

The inner catheter is positioned within the guide lumen and extends through the distal guide orifice. A method of advancing fluid into a blood vessel of a body of a patient is also disclosed.